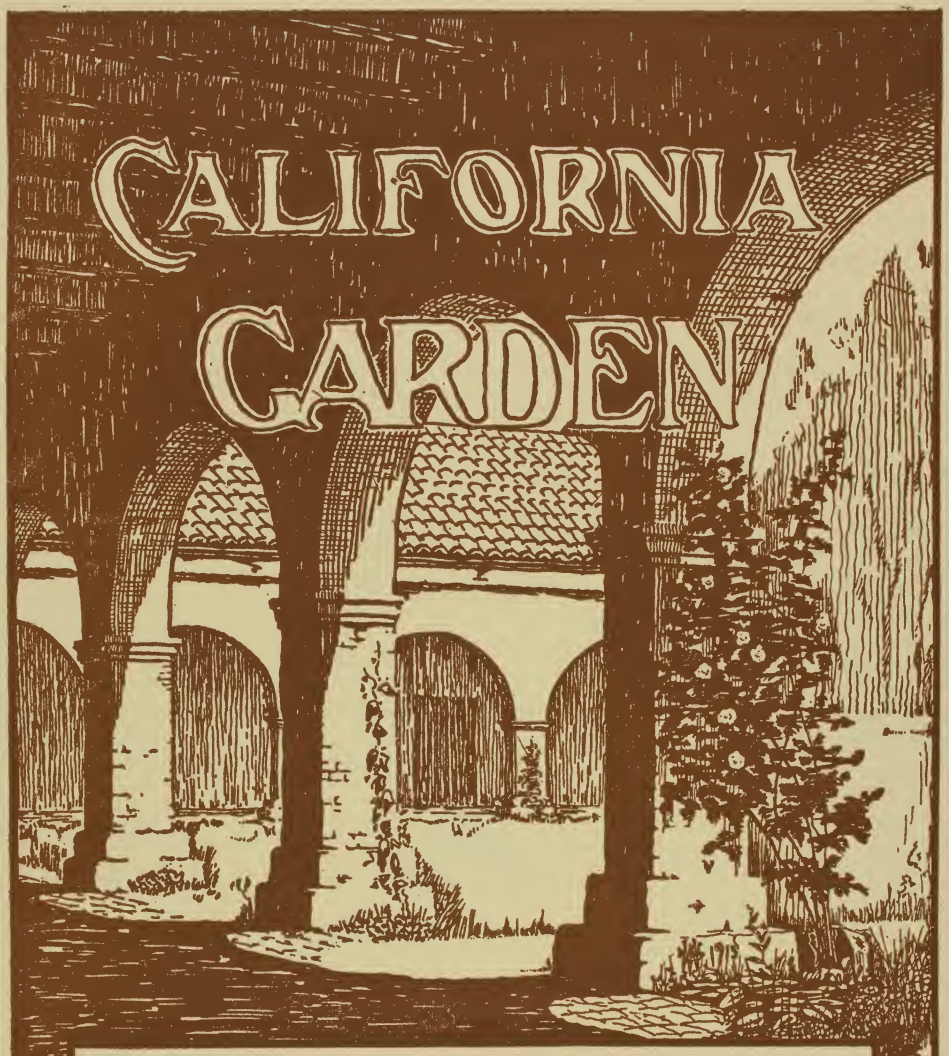

IN THIS NUMBER

SPRING FLOWER SHOW AWARDS
YUCCAS AND MOTHS
A BOTANIC GARDEN ON A HISTORIC RANCH

MAY, 1929 TEN CENTS

CHRYSANTHEMUM PLANTS

A large stock of GOOD NAMED VARIETIES, all grown from top cuttings, thrifty plants in pots, plant now.

* * * * *

DAHLIA BULBS

A choice collection of High Class Bulbs, at very moderate prices. Come in and look them over.

* * * * *

THALICTRUM, dipterocarpum, most attractive perennial, in pots 20c each.

ZINNIA, SALMON QUEEN, pompon, wonderful cut flower, 35c per dozen.

The BEST STOCK of BEDDING PLANTS in the City, raised from HARRIS QUALITY FLOWER SEEDS.

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The magazine—"California Garden," a practical local guide published monthly for 18 years. Subscription $1.00 per year.

The official organ of the San Diego Floral Association, now in its 21st year of continuous activities.

All interested in garden matters and civic beautification are invited to join. Dues $1.00 per year. Magazine and Membership combined $1.50 per year. P. O. Box 323, San Diego.

The California Garden

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Vol. 20 SAN DIEGO, CALIFORNIA, MAY, 1929 No. 11

SPRING FLOWER SHOW AWARDS

TWENTY-SECOND ANNUAL SPRING SHOW
Roses and Other Flowers
SATURDAY AND SUNDAY, APRIL 27 and 28, 1929
MAIN PLAZA, BALBOA PARK
(1 indicates first prize; 2, second prize; AM, award of merit.)

Section "A"—Amateurs

Best collection of roses—not less than 12 varieties and not more than 3 blooms of a kind. (Association Cup.) 1—Walter S. Merrill; 2—Mrs. F. T. Scripps; AM—F. L. Hiatt.

Best 6 varieties of roses—not more than 3 blooms of a kind. (American Rose society silver medals.) 1—E. R. Bliss, jr.; 2—S. B. Osborn; 3—Mrs. Josephine E. Vacher.

Best collection of roses—not more than 1 bloom of a kind. (American Rose society bronze medal.) 1—S. B. Osborn.

Best 3 white roses, one variety. 1—Mrs. Josephine E. Vacher; 2—Mrs. Jennie Owens.

Best 3 red roses, one variety. 1—Frank Strausser; 2—E. F. Wolter; AM—Pearl and Grace Humphrey.

Best 3 yellow roses, one variety. 1—Mrs. W. H. Wilson; 2—Miss Vecta Day; AM—F. W. Arnold.

Best 3 yellow shaded roses, one variety. 1—Mrs. F. S. Callender; 2—E. F. Wolter.

Best 3 pink roses, one variety.—Mrs. Mary Motherway; 2—W. J. Dermody; AM—Mrs. Charles B. Smith.

Best 3 pink shaded roses, one variety. 1—W. J. Dermody; 2—Miss Helen Scott.

Best 3 flame colored roses, one variety (example, Mme. Herriott). 1—Grace and Pearl Humphrey; 2—Mrs. R. M. Pray.

Best 1 white rose. 1—Mrs. Josephine E. Vacher; 2—Mrs. W. H. Wilson.

Best 1 pink rose. 1—Mrs. Mary Motherway; 2—Mrs. Anna Erickson.

Best 1 yellow rose. 1—Mrs. J. C. Konesney; 2—Miss Anna Taylor; AM—Pearl and Grace Humphrey.

Best 1 red rose. 1—Pearl and Grace Humphrey; 2—W. F. Shemer; AM—Frank Strausser.

Best 1 crimson rose. 1—Frank Strausser.

Best 1 pink shaded rose. 1—F. W. Arnold.

Best 1 yellow shaded rose. 1—A. D. Blotti.

Best 1 flame colored rose. 1—W. J. Dermody.

Best single rose (example, Isobel or Irish Elegance). 1—F. L. Hieatt; 2—Mrs. W. H. Wilson.

Best display of Polyantha or baby roses. 1—Miss Florence Weber.

Best display of climbing roses. 1—Mrs. Ida Hewes; 2—Mrs. Josephine Vacher.

Best rose not before shown in San Diego. (San Diego Rose society bronze medal.) 1—E. R. Bliss, jr.; 2—E. R. Bliss, jr.

Best 6 red roses, one variety. 1—Mrs. Grace G. Morris; 2—J. C. Konesney.

Best 6 white roses, one variety. 1—W. S. Merrill.

Best 6 yellow roses, one variety. 1—Josephine Vacher, 2—E. F. Wolter.

Best 6 yellow shaded roses, one variety. 1—Donald Payton; 2—Frank Strausser.

Best 6 pink roses, one variety. 1—F. L. Hieatt; 2—Mrs. Frank A. Dunbar.

Best 6 pink shaded roses, one variety. 1—Mrs. Grace G. Morris.

Best 6 flame colored roses, one variety. 1—Frank Strausser.

Best arranged vase, bowl or dish of roses, greenery allowed. 1—J. C. Konesney; 2—Mrs. Ray H. Tabor; AM—F. L. Hieatt.

Best arranged basket of roses, greenery allowed. 1—W. S. Merrill; 2—Mrs. R. C. Rutan.

Best Rise in the Show

1—Walter S. Merrill.

Section "B"—Amateurs

Best collection sweet peas, 10 stems each. 1—Mrs. R. H. Tabor; 2—John D. Hoffman.

Best vase white sweet peas. 1—Mrs. H. W. Gibbs; 2—Naval Air Station.

Best vase light pink sweet peas. 1—Mrs. Harry Nelson; 2—Mrs. W. H. Wilson.

Best vase dark pink sweet peas. 1—Mrs. H. C. Jorgenson; 2—Alice B. Raymond.

Best vase red sweet peas. 1—Mrs. R. H.

Tabor; 2—Mrs. R. E. Wadsworth.

Best vase lavender sweet peas. 1—Louis H. Baldwin; 2—Mrs. R. H. Tabor.

Best vase blue sweet peas. 1—Rose Troth; 2—Mrs. Maude D. Silkwood.

Best vase purple sweet peas. 1—Mrs. R. H. Tabor; 2—Frank Strausser.

Best vase salmon sweet peas. 1—Louis H. Baldwin; 2—Mrs. Josephine E. Vacher.

Best vase maroon sweet peas. 1—Mrs. R. H. Tabor; 2—Frank Strausser.

Best vase bicolor sweet peas. 1—Mrs. Harry Nelson; 2—Mrs. J. L. Davis.

Best arranged basket of sweet peas. 1—Walter S. Merrill.

Best arranged bowl of sweet peas. 1—Mrs. R. H. Tabor; 2—Mrs. R. H. Tabor; AM—Lydia T. Houston.

Sweet Pea Sweepstakes

1—Mrs. R. H. Tabor.

Section "C"—Amateurs

Best arranged basket of flowers other than roses, wild flowers or sweet peas. 1—W. H. Hutchings; 2—Mrs. F. T. Scripps; AM—Mrs. Chas. Endsley.

Best arrangement of flowers in vase, bowl or dish. 1—Mrs. Robert Morrison; 2—Mrs. Chas. B. Smith; AM—Miss E. B. Scripps.

Best cut specimen flowering vine. 1—Gerald Baldwin jr.; 2—Miss Watt.

Best display of bulb flowers. 1—Naval Air Station; 2—Gerald Baldwin, jr.

Best display of gladiolus. 1—Naval Air Station; 2—Lorena Leesman.

Best display of iris. 1—Miss Mildred McLemore; 2—F. L. Hieatt; Special—Walter Merrill.

Best display of pansies. 1—Miss A. E. Gladwin; 2—Ray Peters.

Violas. 1—Amalia Kleinschmidt; 2—Mrs. H. C. Dunning.

Best display of wild flowers grown by an individual. 1—Gerald Baldwin, jr.

Best display from a 50 foot or less lot. 1—D. F. Harness; 2—Mrs. H. E. Cooper; AM—Mrs. Hans Peters.

Best display cineraries, dwarf hybrid. 1—Mrs. Hans Peters.

Best display of cinerarias, stellata. 1—Gerald Baldwin, jr.

Best potted cinerarias, stellata. 1—Gerald Baldwin, jr.

Best display of pelargoniums or Lady Washington geraniums. 1—Naval Air Station; 2—Mrs. Katherine Thompson.

Best display of geraniums. 1—Mrs. G. W. Brown; 2—Mrs. Jennie Owens.

Best display of stocks. 1—Harry Nelson; 2—Mrs. H. C. Jorgenson.

Best display of snapgragons. 1—Naval Air Station; 2—Frank Strausser.

Best display of calendulas. 1—Mrs. Hans Peters; 2—Mrs. Jennie Owens.

Best display of larkspurs. 1—Mrs. F. T. Scripps.

Best display of fuchias. 1—Mrs. W. S. Thomas.

Sweepstakes, Classes 57-67A inclusive, Naval Air Station.

Best display any other flowers not otherwise classified. 1—Mrs. Mabel Knox; 2—Mrs. Annie Hull.

Best display of grasses. AM—Carroll de Wilson Scott.

Best collection of succulents and cacti, suitably arranged. Special—Mr. Hemala.

Best collection of native cacti S. D. county. AM—Mrs. Mary Gemmell, chairman conservation.

Best dining table decoration. 1—Miss Madelyn Clark; 2—Miss Alice Halliday; AM—Miss Alice Greer.

Best Japanese arrangement of flowers in vase or bowl. 1—Mrs. F. S. Callender; 2—Miss Ethel Henderson; AM—Mrs. Frank Mott.

Novelty. AM—Naval Air Station.

Section "D"—Children's Classes

Best display from a school garden. 1—El Cajon Valley grammar school; 2—Garfield school.

Special exhibit. Special—Garfield school.

Special exhibit. AM for basket of Mustard. Pacific Beach School.

Best collection of wild flowers from any school in city. 1—Pt. Loma high school Campfire girls.

Best collection of wild flowers by any school in county, outside of city.1—Rancho Santa Fe; 2—Green Valley school, Encinitas.

Section "E"—Professionals

(Entries by Nurserymen)

Best display of cut roses. 1—Mission Hills Nursery.

Best collection of rose bushes in bloom. 1—Mrs. E. Benard; 2—Mission Hills Nursery.

Best general display of cut flowers other than roses. 1—Monarch Bulb & Nursery Co.; 2—Thomas F. McLoughlin; AM—Glen Abbey Memorial park.

Best general display cut flowers not before exhibited. 1—Miss K. O. Sessions.

Best display of sweet peas—separate varieties. 1—Mrs. R. R. Wood.

Best general display of shrubs and plants. 1—Mission Hills Nursery. 2—Rosecourt Floral Co.

Best display of everlasting flowers. 1—Monarch Bulb & Nursery Co.

Best display of bulb flowers. 1—W. Murray Hawkins; 2—E. P. Zimmerman.

(Entries by Florists)

Best arranged basket, bowl or vase of cut flowers. 1—E. P. Zimmerman; 2—Elite Flower Shop.

Special awards—Park Board, Kate O. Sessions, Natural History Museum, Rosecroft Gardens, Nature Class of O'Rourke Zool. Institute and Briggs Floral Co.

Patronize the Garden Advertisers.

THE POPPIES' SPRINGTIME BALL

Gay poppy girls excited at the coming of the Spring
Flounced their saucy skirts and started out to plan a fling.
And after impish plotting, they began their gleeful task
Of asking all the flower folk to a Spring ball masque.

Soon in pairs and parties, they came trooping far and near—
The flowers and their escorts for the grand fete of the year.
Sveldt denizens of woodland, garden, vale and lane,
Homage paid to hostesses as day began to wane.

Then the bullfrog orchestra a march began to sing,
And after this procession, the affair was in full swing.
The flowers started dancing and their escorts for a goal
Of berry punch the poppies brewed in a mushroom bowl.

The hoppergrass disgruntled over this decorus stew,
Became intoxicated on delicious mountain dew.
Then tipsily-two-stepping, danced through the evening shine
With honeybees that staggered on a jag of nectar-wine.

A jonquil and a marigold sat out a waltz to pet,
While a pansy and a cowslip did the dainty minuet.
Fat ladybugs disliking lonely seats on spinsters' wall
Quick-stepped a fancy cake-walk at the poppies' Springtime ball.

The moon, round-faced and jolly, stayed up to keep things bright
And laughed amain to see such dancers step the quick and light.
Then dawn, in huge amusement, persuaded rain to fall
Which brought a sudden ending to the poppies' Springtime ball.

Contributed by Fashion O'Day,
La Loma, 1331-4th, San Diego.

MY WILD FLOWER GARDEN

By Herbert Durand

(G. P. Putnam's Sons, 1927).

Owing to quite extraneous causes our notice of this pleasant volume has been delayed a bit, publication having occurred late in 1927, but as it is a book in which all owners of gardens, especially the owners of small gardens, will take keen delight and which will never be quite out of date, mention of it in the **California Garden reviews** should not for that reason be foregone. Everyone who has attempted it knows how tragically difficult it is for ordinary mortals to dig up wild plants and make them at home under what must seem to them the violence and crassness of our gardens. In this craft, however, Mr. Durand has made himself an accomplished artist. The vain devastation of countryside brought about by so many of our incorrigible plant collectors is not for this author. He feels no compunctions "about digging any wild plant that will grace his garden if it is growing where new streets are under construction, building lots are about to be laid out and utter extinction of all wild life is imminent. That is an act of charity like rescuing some homeless waif from the perils of the slums." And due restraint in the collection of his specimens is not all. Mr. Durand does not, as most of us do, drag them city-ward but to languish, forthwith miserably to die. His enjoyable illustrations show that he knows how to make them at home, often happier it would seem than in the original haunt, and he tells us much in this book as to how this may be brought to pass. His passion for the wild things springs moreover from a deeper motive than the mere zeal for collecting. He feels that now we are at last coming to realize "that much of the exotic planting material that has been foisted upon us has no proper place in our scenery. We are becoming convinced that native trees and bushes should after all and by right, predominate in the composition of our home landscapes so that the resulting pictures shall reproduce in some degree the pleasant aspects of the surrounding countryside. **And this is the very essence of true landscape art.**" The building of an actual "all-American" rock-garden and the restoration of a tangle of neglected woodland are interestingly narrated in two of the chapters.

One special chapter devoted to soil acidity and its problems may yield the clue to our better handling of some of California's more intractable endemics. Let us hope, however, that the enthusiastic reception of such information will not entail forgetfulness on the part of any of us of the author's sound advice that "if a specimen of difficult culture is encountered by an amateur, the temptation to dig it should be firmly resisted" unless of course we certainly know that some surer and worse fate is likely to befall it.

S. S. B.

Patronize the Garden Advertisers.

Financial Report of Spring Flower Show held April 27 and 28, 1929:

Gate Receipts		$843.35
Disbursements—		
Trophies	$86.65	
Engraving	7.75	
Advertising	47.20	
Publicity	15.00	
Ribbons	12.90	
Muslin table covers	10.30	
Cash tray	2.25	
Printing	20.50	
Window cards	4.25	
Mailing tubes	3.00	
Seals	2.20	
2x3 cards	.75	
Clerk's supplies	5.20	
Park Department	65.00	
Postage	2.00	
Laundry	7.00	
Men's labor—51 hrs. @ 50c	25.50	
Total		317.45
Net Receipts		$525.90

Signed:
MARY GREER, Chairman
WINIFRED SINCLAIR, Secretary.
JOHN BAKKERS, Treasurer.

WATER GARDENS

By Mrs W. S. Thomas

I believe that water lilies and all inhabitants of the pools are fully a month behind regular schedule, due to our long cold spell. The tropical lilies in my pools lost all leaves and roots, something quite new, as some leaves and blossoms usually are in evidence till new growth in the Spring crowds out the old ones. But the bulbs are still sound, therefore they will start again. Some are always earlier than others, the Pink Star particularly so, several are now showing two and three leaves. Two small bulbs of the Blue Triumph also are now showing sprouts.

Night bloomers refuse to live over in open pools—even in San Diego. All water lily catalogues tell you to consider them an annual, but I refused to believe they would not survive our mild winters if other tropical ones did. The gorgeous Frank Trelease looked very healthy till later January this year, and I was all ready to begin bragging that it had lived. Then it began a decline and the bulb softened. But a side shoot taken off in the Fall is now showing a leaf, so I am still hoping we can tell these lily specialists that San Diego has beaten them.

But even if we must buy new ones each year, the night bloomers are so gorgeous, so fragrant and so cheap that every pool should have one. And Frank Trelease seems to be the most brilliant colored of all. The leaves also are beautiful, a bronze green and very large.

AVERAGE OF 1,000 CANARIES A DAY IMPORTED LAST YEAR

More than half a million foreign birds were imported into this country during 1928, a figure never before attained, according to the Biological Survey of the United States Department of Agriculture. The bureau is charged with the supervision of all importations of foreign birds and some mammals to prevent the introduction of injurious species and diseases. Canaries, as before, constitute the largest number of these bird immigrants, averaging more than 1,000 a day for 1928. Nearly two-thirds of all game birds imported have been Mexican quail. Next to these stand pheasants, formerly a large item in the entries, but State game farms and private enterprises now supply most of the stock for this country, and importations have fallen off considerably.

Permits issued during the year for importations of birds and mammals numbered 1,211, an increase of 144 over those of the preceding year. Six additional permits were issued at Honolulu, Hawaii, for the entry of 53 miscellaneous birds. The total number of foreign birds imported was 682,308, including 458,449 canaries, 56,307 parrots, 84,915 quail, and 82,637 representatives of miscellaneous species. Permits were also issued for the entry of 4,956 eggs of game birds, as against 530 in 1927. These shipments were principally pheasant eggs from England. Eggs of ducks and grouse were also entered from Alberta.

About one-third of all the known species of parrots have been brought in at various times for exhibition purposes, and, like canaries, the numbers have increased considerably since the World War. Very few parrots breed in captivity in the United States, but some live for a number of years. The largest number come from Australia and tropical America, especially Cuba, Panama, and Mexico. Cage birds still come from Mexico, but in reduced numbers, because the Mexican government now requires export permits for cardinals, mocking birds, and certain other species, and authority for possession must also be obtained from the State to which they are consigned.

NEW MEMBERS AND SUBSCRIBERS FOR MAY

Mrs. M. F. Culbertson, San Diego.
Emerson Cooper, San Diego.
Mrs. E. L. Fisher, San Diego.
J. L. McDonough, San Diego.
Mrs. F. L. Stokes, San Diego.
Mrs. C. E. Rinehart, San Diego.
Mr. Fred H. Smith, Escondido, Calif.
Mrs. Hartwick Barnes, San Diego.
A. J. Zemanski, San Rafael, Calif.
Mrs. M. W. Brachman, Pacific Beach, Calif.

Patronize the Garden Advertisers.

The May and June Gardens

THE GARDEN

By Walter Birch

There is a great tendency these times to plant bulbs and flowering plants both too early and too late for really satisfactory results, and as our planting season for most growing things are usually of fairly long duration, it is unnecessary to go to either one extreme or the other.

The month of May is particularly good for setting out chrysanthemums, which should be planted in a sunny location in good rich soil that has been well manured. They develop a very strong root system, so ground should be work to a good depth. A bed three feet wide and as long as required, with a ridge of soil around it to facilitate occasional flooding, will allow room enough for two rows of plants, leaving a foot on each side and between the plants. It is important that your plants come from top cuttings and are well rooted and thrifty, if you want good flowers. Many plants are raised from side shoots from the parent plants, but they do not produce a first-class quality of flowers. When planted in permanent bed, apply a good surface mulch of well rotted manure both for feeding and conservation of moisture. The growing of really fine mums is an art that requires very close attention and considerable experience, but in a general way the following suggestions, if carried out, should give reasonably good results.

When plants are about ten inches high, pinch out the center so as to make them break, and when the shoots are started decide how many you wish to retain on each plant. For large blooms it is best not to retain more than three or four, but for a good show of flowers probably twice that number. For the larger blooms the plants should be supported by stakes, for ordinary flowers, on plants that are well pinched back, staking is not necessary, as the plants are more dwarf in growth.

May is a fine Dahlia planting month, particularly this year owing to our cold and backward weather up to the beginning of the month. No doubt a majority of dahlia bulbs are already in the ground, so be careful to pinch back top of plants after four or five pairs of leaves have been developed. This will give better flowers and longer stems for the lateral growths. After blooms start be very careful not to cultivate near plants. Spread a good mulch on the surface of the ground of cow or horse manure which can be supple mented occasionally by a little bone meal or blood and bone, close enough to plants so that the roots will be fed by it; Spray foliage occasionally with water to keep it clean and prevent insect troubles. Use Black Leaf "40" to combat thrips, sulphur for mildew and arsenate of lead for leaf eating insects.

Plant more Asters, Zinnias and African Marigolds, either seeds or plants, they will give a good account of themselves during the summer and fall.

Set out some strong plants of Thalictrum Dipterocarpum, they are most attractive in single plants or groups amongst the lower growing flowers. Three or four feet high, beautiful foliage like maiden-hair fern, long stems with sprays of lavender colored ball-shaped flowers, most attractive and pretty.

Practically the whole list of annuals and perennials can now be planted.

Make a planting of gladioli bulbs and have crop of these attractive flowers in the late summer.

In the vegetable garden, if you indulge in one, set out plants of tomatoes, peppers, egg plant, chives, parsley, thyme and other herbs. Plant Stringless Green Pod and Kentucky Wonder Beans, also Golden Bantam and Oregon Evergreen Sweet Corn and melons, etc.

These are all easy to grow, only reasonably good soil properly fertilized, and uniform watering and cultivation.

SONG OF THE MEADOW LARK

Twirling notes with saucy curls,
Laughing rills and showers of pearls,
Beads of gold on silver string,
Crystal tones the echoes ring.
Tones sublime, clear and exultant,
Not of bird but soul triumphant.
Rapturous joy, unbounded, sweet,
Brief the song and teasing fleet.

—Elizabeth P. Pickett.

Patronize the Garden Advertisers.

The California Garden

Editor
R. R. McLean
Associate Editors
John Bakkers
Alfred D. Robinson

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Subscription, $1.00 per year

McKELVEY'S
Elite Printing Co. 851 2nd. St., San Diego

EDITORIAL

THE SHOW

The twenty-second Annual Flower Show of April 27th and 28th was held later than usual. The cool Spring held back the blooms well and the result was an extra choice showing of quality flowers and an excellent variety. Many compliments were given by out of town visitors and a particularly favorable comment came from a well versed plant and flower patron from Boston. She said she enjoyed this show more than any of the many she had attended.

The Sweet Pea exhibit, with its 13 classes, was of an exceptional quality and plenty of entries. The Rose display called for 29 exhibits and was very complete and several new varieties were shown for the first time. The baskets of flowers were certainly more artistically arranged than of any previous show, both as to color and quality. The judges must have had a difficult task to decide for the prizes.

The Iris display also was the largest and best ever shown and more entries. Native Pacific Coast varieties of seedlings about 8 years from seed were particularly fine and the native San Diego seedlings were lovely, called Tenex. Snapdragons were finer than usual, while the geraniums made a very poor showing. The Wildflower displays by schools, and the display of grasses, was particularly well set up and showed the results of experience from previous displays. The two Desert exhibits were excellent and well placed and the desert flowering shrubs and perennials were most interesting and well displayed.

The booth showing Japanese flower arrangements was a beautiful feature. A bamboo frame covering was prettily decorated with various Wistaria branches in bloom. Seven displays by nurserymen and florists occupied one and a half sides of the hall and, although there was practically no competition, the displays were individual and different but well arranged—quality extra good and all were instructive. Some interesting novelities were shown. The display of Cacti was small, but fine. The Rock Garden plants in general were practically absent. The five decorated tables were conspicuous by the simplicity of decoration, which was an asset and not a fault.

Balboa Park made its usual quality display and showed fine branches of a double flowering white Cherry, very unusual for San Diego city as this is a poor climate for the cherry.

There was a choice though small display of local made pottery vases for flowers.

The attendance was excellent and it was quite evident that there was an appreciation of the rapid and hard work by all the exhibitors.

The judges for the show were three Los Angeles nurserymen.

—K. O. S.

The Floral Association marks another Flower Show in its series of forty-four shows. Isn't this a remarkable record for an association? To have held together in harmony and with a steady growth through twenty-two years is a thing almost unprecedented in the history of floral organizations. The underlying spirit of helpfulness of the various chairmen, directors and members of the Association is responsible for this progress. We realize that without this loyal support of all our workers and patrons the shows would not have established for themselves the reputation they have attained.

This season everything was in our favor; the cool weather, the abundance of bloom, the fine quality of the gardens, the growing interest in flower shows and in garden lore.

Amongst the trophies were noted with interest the two cups offered by Mr. Frank Strausser and one by Mr. John Snyder for the winners in the garden contest. As usual, Mrs.

Leonard Ellis offered an Iris trophy and Mrs. John Clark and Mrs. W. W. Wilson gave trophies for Japanese arrangements.

We wish to thank all those who in any way had a hand in this our record breaking Spring Flower Show. Let us now look forward to an equally fine Fall Flower Show.

MARY GREER.

No mention was made in the news reports of the show of the award made to Mr. A. D. Robinson for his beautiful display of tulips and pansies. The Floral Association takes this means of apologizing for this omission.

APRIL MEETING

The regular monthly meeting of the San Diego Floral Association was held April 16th at 7:30 p. m. in the Floral Building.

Mrs. Greer, the president, called the meeting to order, after which she made announcements pertaining to the Spring Flower Show —calling upon two or three of the chairmen to speak for their departments.

The president next introduced the speaker of the evening, Dr. Myrtle Johnson, of State College, who gave a most interesting talk on "Sea Shore Life." Dr. Johnson first described two kinds of life found on the shore and then illustrated her talk by moving pictures which she had secured with infinite patience.

Several interesting specimens of flowers and shrubs had been brought in which Miss Sessions named and described, after which the meeting adjourned and those present were served dainty refreshments by the house committee.

W. SINCLAIR, Secretary.

MAY MEETING

The regular monthly meeting of the San Diego Floral Association will be held Tuesday, May 21st at 7:30 p. m. in the Floral Building. Plans for the evening have not been definitely arranged when we go to press, but the program committee assures us of an interesting program for that date. Further notices will appear in the daily papers.

Miss Kate Sessions has invited the members of the Floral Association to visit her garden at Pacific Beach at 2 o'clock on Saturday afternoon, May 18th. After visiting her garden the party will proceed at 3:30 to the garden of Dr. H. K. W. Kumm, also of Pacific Beach. Dr. Kumm is a man of wide experience and travel and his interest is chiefly in raising the many varieties of Passion flowers and fruits. This will be a rare treat for the members of the Association.

Mr. Thomas Hamilton and Mr. Walter S. Merrill cordially invite the members and friends of the San Diego Floral Association to visit their gardens in La Playa, on Thursday, the sixteenth of May, from two until six o'clock. These gardens are near the end of the Number 13 street car line, one and two blocks west of Rosecrans Street at McCall.

MEMBERS VISIT MRS. EVANS'S GARDEN

The members and friends of the Floral Association were invited to visit the garden of Mrs. Herbert S. Evans in Plumosa Way on the afternoon of Wednesday, April 24th. Many took advantage of this opportunity of seeing what is, without doubt, one of the finest small gardens in Southern California. As this visit has become an annual event in the programme of the society, it is not necessary to describe the garden in detail. It should be stated, however, that the garden is more beautiful than ever before—the flowers and plants being unusually fine, and the several changes made during the past year now proving themselves most wise. The planting of the upper court is now simpler; the large bed of cinerarias under leptospermums has been replaced by lawn; and the flower-beds are now edged by the smallest possible curb of brick instead of the former edging of santolina. A beautiful little terra cotta fountain has been let into the wall near the entrance gate. In the canyon, the steps have been carried farther down, and the naturalization of bulbous and other plants has been continued nearly to the bottom.

The three outstanding features of the garden this year are: the multijuga wistarias (pink, white and lavender) on the pergola; the iris (magnificent San Gabriels near the house and many fine varieties in the terraces in the canyon); and, best of all, the extremely fine climbing roses (Beauty of Glazenwood on the pergola, Los Angeles on the house, and Belle of Portugal, Mme. Abel Chatenay, yellow banksia and others trained several feet above the wall on wires strung between the cocus plumosas.)

Mrs. Evans's garden is an inspiration to all who are working for the good of the city, and all who see it feel grateful to her for opening it to so many garden lovers.

W.S.M.

AN AFTERMATH OF THE SHOW

Will the party who, by mistake, took the large brass (18-inch) flower bowl and holder from the Flower Show in Balboa Park, please send it to the Harris Seed Co, 913 7th Street, and they will return it to the owner.

Patronize the Garden Advertisers.

YUCCAS AND MOTHS

By Harry Johnson

Recently I have been going over again the work of Dr. C. V. Riley on pollination in the genus Yucca. Dr. Riley together with Engelman early in the 1870's made the original observations on the dependence of Yucca filamentosa, an eastern species, on the Yucca Moth —Pronuba Yuccasella. For some 20 years Dr. Riley observed in all parts of the country the various Yuccas and their pollinators and in 1892 and 1893 incorporated these in a most interesting account in the Annual Report of the Missouri Botanical Gardens, together with some 75 plates and figures.

The Yuccas are incapable of transferring their own pollen from the anthers to the stigma and as the pollen is generally somewhat sticky the wind can play no part at all, leaving the plant entirely dependent upon the Yucca moth for its perpetuation. The flower of the Yucca is like that of a lily to which family it belongs, a bell-shaped perianth within which is the ovary or undeveloped seed pod surmounted by a thick style and 3-rayed stigma. At the base of the ovary arise 6 stamens which do not nearly reach to the stigma.

Few plants are entirely dependent upon a single species of insect for pollination but in all the capsulate species of Yucca each is helpless without the aid of its own particular yucca moth. The moth is just as dependent upon the Yucca for within the seed pod its larvae are hatched and fed upon the swelling ovules which the mother insures by patiently packing the stigmatic cavity with pollen. Thus again we see the marvelous and intricate linking of diverse lives which is so omnipresent but which we as fallible mortals so seldom see.

At the time of the Yucca flowering, which varies with the locality and the species, the tiny Yucca moth emerges from its cocoon within the ground at the base of the Yucca plant. Nature has provided the Chrysalis with a stout spine upon its head which well serves it in its upward thrust from the buried cocoon. Climbing within the shelter of the leaves it slowly expands and drys its wings waiting for dusk before it begins its search for a mate and the fulfillment of its destinies. The female when her eggs are ready for deposition seeks a freshly opened flower and running to the top of a stamen scrapes from the opened anther a load of pollen which she deftly shapes in a ball repeating the process from anther to anther until a load two or three times the size of her head is collected. This she clasps tightly beneath her throat and then climbing to another flower, or often flying to another plant, proceeds to lay her eggs. The eggs to be properly protected must be laid within the walls of the seed pod and to perform this she has been provided with a most delicate and effective device. The ovipositor, or organ which performs this work is, in the act of ovipositing, protruded from the base of the abdomen. It consists of a granulate basal and smooth termal portion. From the distal end the smooth extensile oviduct is extruded. This oviduct is fine, silk-like, and very elastic, and passes the egg to its destination within the fruit.

After determining upon the flower, she climbs upon the ovary and settling herself rests motionless for a time, then slightly raising the abdomen, thrusts the lance-like ovipositor through the soft walls and with the aid of the oviduct conducts the egg among the ovules. After a minute the ovipositor is withdrawn, and then running to the top of the pistil she deposits a part of the load of pollen upon the stigma, thrusting it down with her tongue to make sure that fertilization will take place. This process is repeated from flower to flower.

After about a week the egg hatches and commences to feed upon the developing ovules. The irritation caused by the laying of the egg arrests the development of the ovules immediately contiguous with the egg which would otherwise crush it. The larva matures at about the same time the seed is developed, generally in about a month. Many seeds are produced in each capsule, yet a dozen seeds suffice for the needs of each larva so that an abundance are left to perpetuate the Yucca. At this time the larva bores its way to the surface which during the hours of nightfall it drops from a silken thread to the ground and burrowing down spins its cocoon, closing the cycle.

The precision with which the two organisms are geared to run together is shown by the exactitude with which the moth coincides in appearance with the flowers. Furthermore, Yuccas have off years in districts when few flowers will appear and to circumvent this periodicity the moths do not all come forth the first year, some holding over for the second or third or fourth, thus insuring their perpetuation in spite of bad seasons.

Most of the Yuccas native to the region east of the Rockies are pollinated by Pronuba Yuccasella, while our native species (Hesperoyucca Whipplei) is visited by an allied species, Pronuba maculata. Our other species, the Joshua Tree of the Mohave Desert, Yucca brevifolia, is pollinated by Pronuba synthetica while later investigation in Mexico and Central America must have revealed a number of other species coincident with the diverse Yuccas of these regions. Apparently the life histories of these forms are quite similar as regards the main features though differing in detail with diversity in ecological conditions.

A further most interesting case of dependence is found in the closely allied moths of the genus Prodoxus, who inhabit the same Yuccas as do the Pronuba moths and vary

in species with the Yucca host. In appearance they are hard to tell from the Yucca moths but are generally a little smaller and darker colored. In the capsulate Yuccas they lay their eggs within the flowering stem leaving the fruit to the Yucca moths. Their life history is much the same except that they do not act as pollinators but depend for their existence upon the true Yucca moths, for if the flowers are not pollinated the flower stalks soon wither away. The larvae also pupate within the stalk not dropping to the ground and hence the chrysalis does not have the spine on the head as it does not need it to burst from the stem. It has the same tendency to retardation in development as noted in Pronuba.

Thus we see a further ramification in this inter-dependence of life, and were we gifted, most assuredly we would find other lives knit in the fiber touching and linking in their phases each cycle dependent for its fulfillment upon its proper gearing in time and space to its symbiant.

IMPARIPINNATIPARTITE!

In the delectable introduction to "The English Rock Garden," the late Reginald Farrer has many things to say concerning common and Latin names, and gives this as an example of botanical English—"an acaulescent herb of circinate vernation with the leaves imparipinnatipartite or uncinatelyrate with mucronate-crenlate lobules, setulose-papillose, decurrent, pedunculate and persistent"—which he translates as—"stemless, with undecaying leaves uncurling from the center, set with bristly little warts and cut into an uneven row of featherings, with the lobes pointed and scalloped around the edge, some having a barbed, spear-headed effect, standing on foot stalks, down along which they continue in winglike flaps on either side." Scholars without a saving grace of humor were, and presumably still are, quite horrified at so buoyant a reading, but for the layman there is a zest in this vocabulary which is a perennial joy, so much so that a page or two of Farrer on a dull day will make the spring again.—B. Y. Morrison, in The National Horticultural Magazine, January, 1929.

THE HOME GARDEN HANDBOOKS

Evergreens for the Small Place
By F. F. Rockwell
Rock Gardens
By F. F. Rockwell
Dahlias
By F. F. Rockwell
(The MacMillan Co., 1928-29—$1 per vol.)

These three volumes from the Home Garden Handbook series are helpful little primers designed mainly for the beginning gardener to aid him in avoiding as many of the pitfalls likely to beset the novice as can well be done between two small covers. All are illustrated with numerous quaint, enticing, and for the most part well conceived line drawings, and the volume on Evergreens with photographic halftones as well. Types and varieties, soils, planting and transplanting, and general care are well dealt with, although it seems to the reviewer that the lists of rock garden plants suggested are rather poverty-stricken as to variety. In some instances the author seems to labor under a confused perception of the difference between genus and species. This may not be much noticed by the casual reader but is not calculated to add to clarity of statement.

Recognizing that the dahlia has attained its great popularity today because it offers "to a greater degree than any other flower, a wide range of bright colors and great size," the author warns that unless other qualities than mere size and symmetrical formation are given more consideration by fanciers, its heyday soon will pass. Frequent cultivation at first, followed by mulching and careful attention to the type of fertilizer used (potash is recommended as a main reliance rather than nitrogen), are the principal cultural practices recommended for this flower. Detailed instructions as to the proper care and treatment of cut blooms will be appreciated by many.

In perusing the volume on Evergreens one is tempted to ask if terms like "redcedar" and "baldcypress" are acceptable, why not as sensibly "pyramidalredcedar" and "Chinesejuniper"? Cupressus macrocarpa is of course no form of sempervirens, nor is nootkatensis, which properly belongs to a different genus.

One of the dahlia pests discussed is consistently spoken of as "thrip". These are commendable and useful little books in a general way, but the picking up of innumerable little points like those cited will help them greatly if they go into further editions.—S. S. B.

STATICE ARBOREA

Four years ago I purchased a small plant at a cost of twenty-five cents which is now 4½ feet across, 2½ feet in height and has 21 large trusses of gorgeous blue flowers, each one about 3 feet in height and as large as a dinner plate. It is never without six or eight of these large bunches of bloom, each one lasting well for three months, and new buds always coming. The leaf is quite similar to Statice Perezzi, but the latter doesn't bloom so freely, nor during the entire year, and neither plant nor bloom stalk grow as large.

Of course I planted it in nearly full sun and gave it plenty of water.

This winter I tried pruning—cutting off the lower drooping branches, and it repaid the work by putting forth twice its usual number of blossom stalks.

MRS. W. S. THOMAS.

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OLD FASHIONED PLANTS

By John A. Armstrong

In landscape planting, as in other lines of endeavor, there is frequently a more or less pronounced trend toward some of the old-fashioned plants. Some of these plants which seem old-fashioned here in California, where everything is new, are strictly up-to-date in the East and Middle West, although they may have been used for years in these sections.

But on the Pacific Coast, with our Pittosporums, our Ericas, our Veronicas and other broad-leaved evergreens gathered from Australia, South Africa, and the Orient, such plants as the lilac and the snowball seem old-fashioned because they were so familiar around the old homes in the East. Used with discretion in our California plantings, they bring some of the atmosphere of the "Old Homestead" to our western sunshine.

The Fragrance of the Lilac

Most of these old-time shrubs are deciduous, of course, and they are usually valued chiefly for their flowers. The first shrub of this nature that comes to mind is the lilac. None of our imported, exotic flowers can equal the delicate fragrance, the soft pastel shades and pleasing grace of the ever-popular lilac. They require a little more care in California than in the more humid climates of the eastern sections, and do best in a partially sheltered spot, protected from the hot rays of our summer afternoon sun; and a little shade will do them no harm. They like plenty of water with the roots left undisturbed by cultivation, and if treated in this way, they will delight us with just as fine fragrant flowers of white, pink, blue, lavender and purple as they used to in Iowa or New York State.

Of course, the old-time Common Purple, with its small, sweetly-scented panicles produced in great profusion in early spring, is most often seen, but we can also grow the larger flowered named varieties, such as the immense-flowered, pure-white Frau Bertha Damman; the dark purplish-red Ludwig Spaeth; the satiny rose, very double Belle de Nancy; and the large pale lilac, Michael Buchner. Certainly these varieties did not originate in Ireland!

Snowballs That Do Not Melt

The snowball, with its huge globular heads of pure white blossoms, is more easily grown here than the lilac, and is not particular as to location. It is indeed a striking plant, with its branches weighed down with its many big white balls, and the foliage during the summer is quite attractive. This is one kind of snowball which we do not have to go to the mountains to enjoy. We can have them in our own back yard.

One of the most fragrant and aromatic of these old, hardy, flowering plants is the Sweet Shrub, Calycanthus, sometimes called Carolina All-Spice. Like the lilac, it prefers some shade in California, particularly in the warmer interior sections. It is a comparatively small plant, usually about three or four feet high, with rather large leaves and many dark chocolate-brown flowers with many petals, about two inches across. A plant somewhere in the garden is worthwhile if you only had a few deep breaths of its sweet, aromatic fragrance.

A lovely old-timer for a semi-reclining position in front of taller shrubs or against a brick wall is the old Japanese Rose, Kerria japonica. It grows four to eight feet high and just as broad, with light-green, arching, spreading stems. In May and June, and to a lesser degree at other times during the summer, its dear little yellow flowers are produced along the stems in great abundance, the blossoms somewhat resembling the Yellow Banksia Rose. The double flowering form, with branches about one inch across, is the most attractive. Again, partial shade is best, to prevent the flower from fading in the hot sun.

Cascades of Snowy Flowers

The tall-growing Mock Orange, Philadelphus, in its various varieties makes a wonderful showing in the spring, its great masses of white blossoms completely over-running the plant. It grows like a weed and any position is satisfactory, but it makes a very large clump in time and will fill a large corner. A little protecting shade will keep its flowers in good condition for a longer time. Philadelphus coronarius is the most common type, and a good one it is, but a new kind, Virginal, has much larger and finer flowers, and very fragrant ones.

There is a climbing species of Philadelphus (P. Mexicanus), very valuable for California, sending long clinging canes to thirty feet or more and producing an abundance of large double creamy flowers with a wonderfully rich and pleasant fragrance. This one is hardly old-fashioned, however, and you never saw it in the boyhood days, unless you were brought up in the mountains of Guatemala, of which country it is a native.—(Courtesy Armstrong Nurseries.)

FLOWER SHOW JUDGES

The judges of the recent flower show were Mr. J. J. Reeves of Beverly Hills, Mr. H. J. Shearer, Compton, and Mr. Alois Frey of San Fernando. The officers and directors of the Floral Association extend their thanks to the above named gentlemen for the conscientious and satisfactory manner in which they made their awards.

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THE FUTURE OF CALIFORNIA'S GARDENS

By Eric Walther

Part 4—New Zealand

In New Zealand will be found another region full of promising new plant material for the purpose of making our gardens more permanently interesting. Located in about the same Southern latitudes as the regions discussed in previous chapters, its range of temperature is about the same, even if more equable on the whole due to the oceanic influence. The rainfall is distributed rather more evenly throughout the year and, while reaching a total of considerable proportions on the west coast of the South Island nevertheless drops in some places to as little as 20 inches annually, so that it would seem as if some at least of New Zealand's unique plants should thrive anywhere in California. One interesting commentary on this assumption is the striking success attained in New Zealand of the Monterey Pine and the Redwood, these two California trees now being very extensively planted there; and its truth is further borne out by the presence in our gardens of such well-known things as Pittosporum eugenioides and P. tenuifolium, Coprosma baueri, Cordyline australis, Phormium tenax, Leptospermum scoparium, Myoporum laetum, Alectryon excelsum, Muehlenbeckia complexa and the numerous "species" of Veronica. Others worth mentioning, even if less common, are the beautiful Parrot's Bill or Red Kowhai-Clianthus puniceus—, the equally striking, yellow-flowered Sophora tetraptera, the graceful Carmichaelia odorata, or some of the many ferns for which New Zealand is famous. Especially notable are the tree-ferns, as Cyathea medullaris and the different species of Dicksonia, a widely known planting of these being in De Laveaga Dell in Golden Gate Park, San Francisco, where some of them have now reached a height of over 20 feet and lend an almost tropical charm to the scene. These were imported from New Zealand many years ago, but recently there appeared on the trunk of one of them a volunteer seedling of some unknown plant. In the absence of flowers this long baffled the local botanists, and the stranger might have remained one indefinitely but for the timely assistance of a hungry rabbit making a meal off the bark of one branch which subsequently flowered, enabling Miss Alice Eastwood of the California Academy of Sciences to determine its identity as Archeria racemosa, of the Epacridaceae.

Golden Gate Park today easily contains the most comprehensive collection of New Zealand plants in California, and they certainly all seem to thrive there, due perhaps to the relatively cool and moist atmosphere of San Francisco's summers. It must be admitted that many New Zealand plants are impatient of drought and require some extra watering, unless growing in some favored location. The above-mentioned collection owes its inception to the foresight of John McLaren, Park Supt., in preserving the plants constituting the most interesting portion of New Zealand's exhibit at the 1915 World's Fair, a nucleus to which numerous, frequent additions have been made since then. Of the many New Zealand plants successful in Golden Gate Park and worthy of a more extended trial mention may here be made of Hoheria sexstylosa, one of the "Lace-barks," so-called from the lacelike inner bark. This belongs to the Mallow family and is an evergreen tree, here reaching a height of about 25 feet, its gracefully drooping branches being loaded in summer with an abundance of white flowers resembling cherry-blossoms. A recent importation is Myrtus bullata, co-generic with the common myrtle, having queerly blistered, bronzy leaves, and said to be one parent of the better known M. ralphi. Griselinia littoralis, of the dogwood family, is a promising evergreen of easy culture, as are also the various species of Olearia, or Daisy-bushes, of the Sunflower family, with O. forsteri and O. traversi the most promising.

It may seem strange to find daisies growing on bushes, but in New Zealand the arborescent habit is developed by a number of families represented in the Northern hemisphere and elsewhere by humble herbs. Another genus of the Compositae assuming a woody habit here is Senecio, but the largest and most interesting one is Veronica, of the Figwort family, with over one hundred known species. These are now considered to constitute the genus Hebe, which is characterized, aside from its woody habit, by the fact that the capsule, when ripe, splits open along the partitions.

That New Zealand plants are worthy of a trial in even the drier parts of the state is shown by the fine specimens of Podocarpus totara growing in the Plaza del Mar at Santa Barbara, numerous fine trees of Corynocarpus known to the writer in the South, and last, but not least, by the marvelous example of Metrosideros tomentosa growing in the grounds of the Hotel Miramar at Santa Monica. In his interesting book, "Trees and Shrubs of California Gardens," Mr. C. F. Saunders tells of a legend current amongst the Maoris to the effect that a tree of this, growing at the extreme northern end of the North Island, serves as the last handhold of the spirits of Maoris departing for the other world. This may be amplified by stating that the tree in question has now been worn almost to a stump, due to the recent high death-rate of New Zealand's aboriginals.

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Another New Zealand plant fairly well known is Fuchsia procumbens, a trailing vine with rather large, red berries, but its congener, F. excorticata, is still quite rare. The latter's flowers are not very showy and evidently produced here only rarely, so that its most interesting feature is perhaps the fact that at home it reaches an occasional height of 45 feet, making it quite "some Fuchsia." The first specimen of this ever seen by the writer locally he found in the nursery of Charles Abraham, San Francisco, which is truly an "Old Curiosity Shop" of plants, and well known as the first home here of many choice ornamentals now commonly cultivated.

Of more desirable woody plants yet awaiting introduction may be mentioned Ixerba brexiodes, Iseusmia macrophylla, Quintinia serrata, Eugenia maire, Elaeocarpus hookerianus, Freycinetia banksi, Rhipogonum scandens, Geniostoma ligustrifolium, Senecio hectori, Corokia buddleoides, Weinmannia racemosa, Olearia semidentata, Chordospartium stevensoni and many others. Much might be said about the many beautiful herbaceous plants indigenous to New Zealand, one of the most striking being the Chatham Island Lily —Myosotidium nobile—a giant forget-me-not, apparently not as yet successfully established here. The typically New Zealand genus Celmisia seems to be quite unknown here, even though considered an essential constituent of all representative collections of Alpine and Rock plants in England. In view of the ever-increasing popularity of Rock Gardens a further investigation of New Zealand's mountain flora might well be worth while, some of its mountains having a covering of perpetual snow and being well termed the "Southern Alps." A few of the more outstanding items of this alpine flora are Ranunculus lyalli, a giant white buttercup; the curious cushion-plants of the genus Raoulia, well deserving their popular appellation "Vegetable Sheep," which is quite descriptive of their unique appearance; the "Eyebrights," of the genus Euphrasia; various species of Ourisia, Myosotis, Gentiana, Wahlenbergia, etc.; the queer-looking "Penwiper plant," Notothlaspi rosulatum; Dacrydium laxifolium, dwarfest of dwarf conifers; numerous Veronicas of the Whipcord section, typified by the well-known Veronica cupressoides; and many others too numerous to mention here.

Nertera depressa is another worthy rock plant long thought to be already present in our gardens, but what went under this name never produced the showy orange fruits constituting its chief merit, and now turns out to be Helxine soleirolii, belonging to the Nettle family. The true Nertera depressa is another recent arrival at Golden Gate Park, just now bearing its first crop of berries.

For further information on the Flora of New Zealand reference should be had to such works as Cheeseman's Manual, of which a new edition has appeared only recently, or more popular books as Laing & Blackwell's "Plants of New Zealand"; or L. Cockayne's "New Zealand Plants and Their Story"; or "The Cultivation of New Zealand Plants," by the same author, the last being a very comprehensive and extremely useful treatment of the subject well worth the small price. Another work just to hand, by Mr. Cockayne's associate Mr. H. H. Allan, is entitled "New Zealand's Trees and Shrubs and how to identify them." This is a most interesting attempt at making possible the ready determination of New Zealand's woody plants using vegetative characters only, and appears to be quite successful. Even if the type of key used is perhaps not the most suitable for such a wealth of material, the booklet should be found very useful even in California, and might well serve as an inspiration for a work along similar lines dealing with the exotics locally cultivated. The best treatment from the phyteogeographical and ecological viewpoint is undoubtedly L. Cockayne's "Vegetation of New Zealand," of which the second edition appeared in 1928.

LIPPIA REPENS FOR PATHS

This climate and location does not encourage extensive lawns and groups of various flowering shrubs and good ground covers can occupy the ground and make for a more interesting garden. Such plantings often require more paths and these may be covered with lippia repens that gives its greenness and low growth with the least amount of care: cutting with the lawn mower two or three times a year only; less water than a lawn requires; very few if any weeds; and the more it is walked upon the better it looks (keeps it low and flat) and practically little if any fertilizer. It was first used for parade grounds and tennis courts in Southern Europe and brought from there to Santa Barbara, and thence to San Diego.

It is best transplanted in narrow lines, two or three rows to the path, during March, April and May. Kept fairly moist for a few weeks by sprinkling, and the lines of small plants will spread rapidly over the surface of the path.

Mr. Walter Merrill's rose garden paths are perfection and the general paths of the garden are also fine, and he is now extending the lippia over other paths. These green and substantial paths are very ornamental among shrubbery and are very practical also. Once in two or three months the edges of the paths can be trimmed off with a sharp spade.

—K. O. Sessions.

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CHINESE IMMIGRANTS FOR CALIFORNIA GARDENS

By John A. Armstrong

Even in California we do not have as many flowers to brighten our gardens in the winter as we have in other seasons of the year. Excellent plants which will take the place of flowers to a large extent during the colder months, are those kinds which cover themselves with brilliant berries, for most of these plants begin to color their fruits in early fall and hold them all through the winter until the spring blooms come again.

One of the best groups of berried plants for our gardens is that of the Cotoneasters. They comprise a number of different species, quite different in appearance and habits, but all of them have one excellent quality in common—their beautiful colored berries. In height they run from eight to ten feet down to prostrate plants less than a foot high, and some are evergreen, while others are either totally or partially deciduous. The flowers are not conspicuous. Most of them are native to the wilderness of Southwestern China and the north slope of the Himalaya Mountains; and while some have been grown in Europe for years and were thence brought to our shores, others have been discovered and introduced directly into this country from their native hills by the intrepid plant explorers of the U. S. Department of Agriculture.

We All Know This One

The most commonly planted of all Cotoneasters in Southern California is Cotoneaster pannosa, a fine plant growing to six or eight feet, with graceful arching branches of gray-green foliage, and many dull red berries which line its stems and persist all winter, because birds do not like them. It is a good plant, but is so easy to grow that it has been used almost too much, and of course we must have variety.

Another evergreen species is Contoneaster acuminata, growing almost as large, but with more stiff, formal branches. The orange-red berries are striking. Cotoneaster franchetti is an upright heavily branched plant with spreading branches and very attractive foliage, somewhat lower than Cotoneaster pannosa. It partially loses its leaves in winter and has orange-red berries. Cotoneaster microphylla, called "Rockspray," is a fine evergreen variety with small, round shining green leaves and bright pink berries scattered along the stem like beads of colored dew. It does not get over three feet high and the branches tend to droop toward the ground, taking root wherever they reach it. Because of this tendency, it makes a good cover for banks. There is a variation of it with minute leaves somewhat more dwarf in habit (Cotoneaster thymifolia).

Low Spreading Types

Then there is that excellent plant, Cotoneaster horizontalis, which, as its name indicates, branches out horizontally, almost flat on the ground. It is almost evergreen and is a beautiful sight when covered with its large bright red berries. Cotoneaster salicifolia (Willow-leaf Cotoneaster) has larger leaves and the branches arch up gracefully before drooping down to the ground—an admirable plant for bank or low wall. The lowest and flattest of all is Cotoneaster prostrata, which seems to be afraid to get a single branch or leaf off the ground makes a dense little carpet of foliage, studded with scarlet fruits. And before we leave this group, we must not forget to mention the dwarf sport of Cotoneaster pannosa, which is called Cotoneaster pannosa nana. It is a counterpart of the popular pannosa, but the foliage is about one-half as large and the plant is very dense and compact, never over three feet high. It is an interesting and valuable plant, evidently originating by accident as a chance seedling.

The Cotoneasters mentioned here are only a few of the many varieties, but these are among the most useful. They will thrive almost anywhere in California, but prefer an open sunny position. They dislike shade.

A Speedy Climber

For a quick cover of an unsightly fence or low building, we can highly recommend a rampant evergreen twiner called Dolichos lignosus. It goes under the common name of "Australian Pea Vine," but this is a misnomer because it came originally from Asia. The neat little leaves get quite dense and the numerous slender twining shoots bear in the winter and spring innumerable magenta-colored pea-like flowers. Heavy frosts may kill it down partly in winter, but it comes up again with extreme rapidity and covers a wide area in a few weeks.

WHITE SAGE

Winifred Davidson

Not wholly routed are the pioneers
Like sage, whose little silver pitchers spout
Each winter, pouring aromatic perfumes out
Where many a pristine hill-trail perserves.
How old will sage be when it disappears
From paths primeval, where deep-rooted, stout,
It sprouts with rain; and with persisting drought
It all but dies, through long unnumbered years?

As old as grass, as old as Summer's thirst!
Of all the stunted Loma shrubs the first
Is grayling sage, uptilting blossomed head
To call wild bees where sweet small fountains burst.
And when bees vanish, tasks quite thoroughsped,
White sage at last will be forever dead.

—From Point Loma Sonnets.

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TREES FOR CALIFORNIA GARDENS
By John A. Armstrong

We are now approaching the season of the year when the Acacias begin to clothe themselves with the masses of fluffy little golden balls which are their flowers. No one minimizes the faults of the Acacias these days, for it is true that they are not always symmetrical, that they rob other trees and plants of moisture, fill drain pipes with roots, and that their branches are brittle. But granting these faults, we still must grow them for the glorious masses of golden bloom. Acacia Baileyana, with blue-gray, fine-cut foliage is much prized for its flowers which are extremely handsome, but it is not primarily a street tree. It is best planted in the garden, where a symmetrical shape is not required and where its flower-laden branches can hang where they like. Some trees of this variety are now in bloom and it brightens the winter months.

Acacia dealbata is a much larger and more rapid grower, and must be given more room, but it, too, is very beautiful in bloom and it usually is a wonderful sight in March and April. Acacia cultriformis, sometimes called Knife Acacia, is so called because the gray leaves look like little three-cornered knives set directly on the stem. It is not a tree, however, but a shrub for massing and hedge planting. It should be pruned occasionally to keep it dense and compact.

The Kangaroo Thorn

Another lowgrowing and rather interesting Acacia is Acacia armata, which has a spread greater than its height, often making a plant fifteen or twenty feet across, but no more than ten feet high. As its name suggests, it is armed with many rather stout prickles or spines, and in Australia is called Kangaroo Thorn, presumably because it abounds in the country where the kangaroos were found. The kangaroos must have tough hides, because no other animal could get through a hedge of it, much less humans; but maybe the kangaroos jump over it. It is a valuable plant because it will grow almost anywhere, and has a deep rich green color unaffected by drouth or dust. It has been frequently used to anchor sand dunes.

A Picturesque Mexican

Another yellow-flowered tree which is particularly suited to our California conditions is Parkinsonia aculeata, the Jerusalem Thorn. It is a native of Mexico but is naturalized over a large section of the Southwest between Southern California and Texas. The leaves are minute and the smooth, light-green trunk and branches shine through. Thickly scattered over the tree in early spring are pretty little yellow pea-shaped flowers, each touched with a spot of red at the base. The bees consider it one of the finest trees grown and all flock around it in blooming time to get honey from the flowers. It is a picturesque tree of medium size and fits in perfectly with Spanish or old California architecture. It is easily grown, requires little water, and is not particular as to soil. A near relative with bright green branches but no leaves at all is the Palo Verde, Parkinsonia Torreyana, which grows wild on the mesas and stream beds from Southern California to New Mexico.

Comparatively New Pepper Tree

The Pepper Tree, along with the Eucalyptus, has been the most commonly grown tree in California in past years. The botanical name of the pepper is Schinus molle, and it came originally from the slopes of the Andes in Peru. A less-known relative of the pepper, but a very fine tree for California, is Schinus terebinthifolius, called Brazilian Pepper, because it comes from Brazil, on the eastern coast of South America. It grows rapidly, and the leaves, larger than those of the Peruvian Pepper, have seven little leaflets, and the trees are usually loaded with red berries when full grown. It is quite hardy and will grow just as well in the hot, dry climate of the Imperial Valley as in the cooler coastal regions.

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A BOTANIC GARDEN ON A HISTORIC RANCH

By Ernest Braunton

On the historic Rancho Santa Ana, which runs for several miles along the winding Santa Ana River in Orange County, Mrs. Susanna Bixby Bryant, the owner, is establishing a botanic garden, of native California plants only, situated upon the hills overlooking the wonderful orchards of the Santa Ana Canyon and, on the river's farther bank, the state highway between Riverside and Santa Ana.

This garden is established in memory of John W. Bixby, Mrs. Bryant's father, who some fifty years ago bought several old Spanish grants which now constitute Rancho Santa Ana.

Since 1809, when the first grant of "Santiago de Santa Ana" was secured by Bernardo Yorba, that part which is now known as "Rancho Santa Ana" has belonged to only two families: the Yorba's, from 1809 to 1875 and to John W. Bixby and his heirs since the latter date. To the original grant Bernardo Yorba added the adjoining "Canada de Santa Ana" and renamed his holdings "Rancho Cajon de Santa Ana." Mr. Bixby added more acreage and named the whole "Rancho Santa Ana."

This is an interesting bit of California land grant history, for so few of the old or original ranches, in this "new" and rapidly-changing West, have remained intact in the hands of two pioneer families over so long a period as 120 years.

Mrs. Bryant has had two hundred acres of this fenced off from pasture lands, an irrigation system installed, roads and trails built, and a nursery established in which 45,000 young native plants have been grown from seeds, to be planted in the botanic garden during the present winter and coming spring. The collection of cactus and many other desert succulents is practically complete.

In a large adobe house just built Mrs. Bryant has incorporated a herbarium 25 by 75 feet, fireproof and furnished with modern fireproof equipment, and a resident botanist installed who is collecting the local native species of plants, also classifying those sent from other parts of the state. So soon as the identity of these is technically established they are filed in the fireproof airtight cases.

A botanical library of about 1,200 volumes forms the nucleus of the book collection, together with many pamphlets, bulletins, etc., relating to California soils, plants, natural water sources, geographical surveys, weather records from all parts of the state, etc. Later, Mrs. Bryant intends to build a permanent fireproof home for this valuable collection of scientific literature.

This library is constantly being added to, as is the collection of live plants in the garden and the dried plants in the herbarium, so that within two or three years there will be present a collection of material of great interest and value to scholars, students and scientists, and the same will be available on certain days to interested persons and classes and on request to botanists and other scientists. As the years roll on these three departments will become increasingly voluminous and valuable until the time will arrive when it is believed that the garden will have no peer on the Pacific Coast.

On account of the great natural scenic beauty of this favored section and the interest that always attaches to development of ranches belonging to pioneers, as well as because of the presence of beautiful citrus and other orchards of extent on the ranch, this property is one of which Southern California, and especially Orange County, will become increasingly proud and increasingly interested in as the accretions of future years add to its value.

For all time California has been the despair of visiting botanists and other scientists. Many of these come from foreign lands with but a limited allowance of time at their disposal in which to cover the botany of the large and varied state of California. We have a domain that is approximately 200 miles wide and eight hundred miles long of mountain, desert, and seashore ranging from almost tropical warmth to peaks of perpetual snow. In altitudinal range it is from the lowest points in the United States, below sea level, as in Death Valley, the Salton Sea, etc., to the highest points in the whole country, such as Mount Whitney and sister peaks of 14,000 or more feet altitude.

Therefore, we have a greater range of climate and a consequent greater number of species, with greater variations, than is found elsewhere and much-traveled botanists familiar with foreign lands are quite puzzled when arriving here as to how best to gain a comprehensive knowledge of our wondrous plant life as it grows in the wilds, within the time at their command.

Visiting botanists in years past have asked me, as they have others, why we do not have one or more botanic gardens for California plants alone so that they could, within a few hours or a few days, gain a comprehensive knowledge of the physical properties of our native flora instead of being obliged to cover various points in this great state at a rate of speed comparable to airplane travel and yet see but a small part of the state's most wonderful flora.

When here recently, Dr. Karl Domin, chief botanist of Czecho-Slovakia, (Charles University, Prague), said to me: "Oh, if you had a

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botanic garden here of your native plants of which I could make a study in a few hours which would now necessitate weeks of travel! You have more species of conifers, or cone-bearing trees, than all of Europe and they are the most magnificent in size and grandeur in the world. You are as fortunately situated with several other orders of plants. Some effort should be made to collect these at one spot, not only for the benefit of visiting scientists but for the education and enlightenment of your own people in general."

It has long been the hope of all interested in this subject that some day we should see a realization of our dreams of sufficient size and equipment that the requirements of visiting scientists could be fully met, a botanical Mecca. At last we have it—the botanic garden that Mrs. Bryant has planned and is building on the Rancho Santa Ana, at present consisting of 200 acres, but possible of easy expansion to include more, even 1,000, by mere shifting of fences. (Following a recommendation made by Dr. C. S. Sargent, director of the famous Arnold Arboretum, Mrs. Bryant asked the writer to make the planting plans for this garden which she is now having carried out.)

In spite of the fact that no previous publicity has been given regarding this project, there is a mysterious "grapevine" telegraph between scientists of the world that has already brought inquiries, to the writer and others, regarding this embryo garden from scientists connected with similar institutions in foreign lands. It would seem from the interest shown and the value placed upon this garden by scientists at home and abroad that California will soon have an educational and research institution of which every resident of the state may be justly proud, one that will be made use of, as a basis of exchange and for research work, by every similar institution in the world. While this will add to our prestige and fame, to our own schools, colleges and individual students, to California, especially to Orange and Riverside counties, because of availability, it will prove a great educational aid and a precious heritage to those who follow.—Reprint from California Cultivator of December 15, 1928.

MAY WEATHER IN SAN DIEGO

Dean Blake

May is characterized by many cloudy, cool days and relatively little sunshine. While the actual temperature is not low, the overcast skies and moist ocean winds produce the impression that it is much lower than that shown by the thermometer. In spite of this, there is a certain mildness that makes the month extremely favorable for outdoor occupations and recreations.

The wet season usually ends during May, so storms are infrequent. On two dates only has the wind reached a velocity of 30 miles per hour, and monthly rain totals over an inch have been recorded, but seven times since the establishment of the Weather Bureau station in 1872.

Naturally, the temperature range is small, and the variation from day to day little, as these characteristics go hand in hand with cloudy weather. Maximum temperatures over 80 degrees are almost unknown, and a minimum of 45 degrees stands as the record.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of California Garden, published monthly at Point Loma, California, April, 1929:
State of California, County of San Diego, ss.

Before me, Clerk of Superior Court in and for the State and County aforesaid, personally appeared R. R. McLean, who, having been duly sworn according to law, deposes and says that he is the Editor of the California Garden, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:
Publisher, San Diego Floral Association, Point Loma, Calif.
Editor, R. R. McLean, San Diego, Calif.

2. That the owners are: (Give names and addresses of individual owners, or if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) San Diego Floral Association, Point Loma, Cal., Pres. M. A. Greer, 2972 First Street, San Diego, Cal.; Sec. Miss Winnifred Sinclair, 3335 Goldsmith St., San Diego, Cal. There is no capital stock.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holders appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has not reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is. (This information is required from daily publications only.)

R. R. McLEAN.

Sworn to and subscribed before me this 23rd day of April, 1929.

J. B. McLEES,
Clerk of Superior Court, San Diego.

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